



SEQUENCE LISTING

<110> VAN ES, Andries Johannes Jozef  
BOUWSTRA, Jan Bastiaan  
TODA, Yuzo

<120> Use of gelatin-like proteins as stabiliser

<130> NY060155VANES

<140> US 10/566,878

<141> 2006-04-04

<150> PCT/NL2004/00552

<151> 2003-08-04

<150> EP 03077451.7

<151> 2003-08-05

<160> 2

<170> PatentIn version 3.1

<210> 1

<211> 1464

<212> PRT

<213> unknown

<220>

<223> COL1A1

<400> 1

Met Phe Ser Phe Val Asp Leu Arg Leu Leu Leu Leu Ala Ala Thr  
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Ala Leu Leu Thr His Gly Gln Glu Glu Gly Gln Val Glu Gly Gln Asp  
20 25 30

Glu Asp Ile Pro Pro Ile Thr Cys Val Gln Asn Gly Leu Arg Tyr His  
35 40 45

Asp Arg Asp Val Trp Lys Pro Glu Pro Cys Arg Ile Cys Val Cys Asp  
50 55 60

Asn Gly Lys Val Leu Cys Asp Asp Val Ile Cys Asp Glu Thr Lys Asn  
65 70 75 80

Cys Pro Gly Ala Glu Val Pro Glu Gly Glu Cys Cys Pro Val Cys Pro  
85 90 95

Asp Gly Ser Glu Ser Pro Thr Asp Gln Glu Thr Thr Gly Val Glu Gly  
100 105 110

Pro Lys Gly Asp Thr Gly Pro Arg Gly Pro Arg Gly Pro Ala Gly Pro  
115 120 125

Pro Gly Arg Asp Gly Ile Pro Gly Gln Pro Gly Leu Pro Gly Pro Pro  
130 135 140

Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Leu Gly Gly Asn Phe Ala  
145 150 155 160

Pro Gln Leu Ser Tyr Gly Tyr Asp Glu Lys Ser Thr Gly Gly Ile Ser  
165 170 175

Val Pro Gly Pro Met Gly Pro Ser Gly Pro Arg Gly Leu Pro Gly Pro  
180 185 190

Pro Gly Ala Pro Gly Pro Gln Gly Phe Gln Gly Pro Pro Gly Glu Pro  
195 200 205

Gly Glu Pro Gly Ala Ser Gly Pro Met Gly Pro Arg Gly Pro Pro Gly  
210 215 220

Pro Pro Gly Lys Asn Gly Asp Asp Gly Glu Ala Gly Lys Pro Gly Arg  
225 230 235 240

Pro Gly Glu Arg Gly Pro Pro Gly Pro Gln Gly Ala Arg Gly Leu Pro  
245 250 255

Gly Thr Ala Gly Leu Pro Gly Met Lys Gly His Arg Gly Phe Ser Gly  
260 265 270

Leu Asp Gly Ala Lys Gly Asp Ala Gly Pro Ala Gly Pro Lys Gly Glu  
275 280 285

Pro Gly Ser Pro Gly Glu Asn Gly Ala Pro Gly Gln Met Gly Pro Arg  
290 295 300

Gly Leu Pro Gly Glu Arg Gly Arg Pro Gly Ala Pro Gly Pro Ala Gly  
305 310 315 320

Ala Arg Gly Asn Asp Gly Ala Thr Gly Ala Ala Gly Pro Pro Gly Pro  
325 330 335

Thr Gly Pro Ala Gly Pro Pro Gly Phe Pro Gly Ala Val Gly Ala Lys  
340 345 350

Gly Glu Ala Gly Pro Gln Gly Pro Arg Gly Ser Gly Glu Gly Pro Gln Gly  
355 360 365

Val Arg Gly Glu Pro Gly Pro Pro Gly Pro Ala Gly Ala Ala Gly Pro  
370 375 380

Ala Gly Asn Pro Gly Ala Asp Gly Gln Pro Gly Ala Lys Gly Ala Asn  
385 390 395 400

Gly Ala Pro Gly Ile Ala Gly Ala Pro Gly Phe Pro Gly Ala Arg Gly  
405 410 415

Pro Ser Gly Pro Gln Gly Pro Gly Gly Pro Pro Gly Pro Lys Gly Asn  
420 425 430

Ser Gly Glu Pro Gly Ala Pro Gly Ser Lys Gly Asp Thr Gly Ala Lys  
435 440 445

Gly Glu Pro Gly Pro Val Gly Val Gln Gly Pro Pro Gly Pro Ala Gly  
450 455 460

Glu Glu Gly Lys Arg Gly Ala Arg Gly Glu Pro Gly Pro Thr Gly Leu  
465 470 475 480

Pro Gly Pro Pro Gly Glu Arg Gly Gly Pro Gly Ser Arg Gly Phe Pro  
485 490 495

Gly Ala Asp Gly Val Ala Gly Pro Lys Gly Pro Ala Gly Glu Arg Gly  
500 505 510

Ser Pro Gly Pro Ala Gly Pro Lys Gly Ser Pro Gly Glu Ala Gly Arg  
515 520 525

Pro Gly Glu Ala Gly Leu Pro Gly Ala Lys Gly Leu Thr Gly Ser Pro  
530 535 540

Gly Ser Pro Gly Pro Asp Gly Lys Thr Gly Pro Pro Gly Pro Ala Gly  
545 550 555 560

Gln Asp Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Ala Arg Gly Gln  
565 570 575

Ala Gly Val Met Gly Phe Pro Gly Pro Lys Gly Ala Ala Gly Glu Pro  
580 585 590

Gly Lys Ala Gly Glu Arg Gly Val Pro Gly Pro Pro Gly Ala Val Gly  
595 600 605

Pro Ala Gly Lys Asp Gly Glu Ala Gly Ala Gln Gly Pro Pro Gly Pro  
610 615 620

Ala Gly Pro Ala Gly Glu Arg Gly Glu Gln Gly Pro Ala Gly Ser Pro  
625 630 635 640

Gly Phe Gln Gly Leu Pro Gly Pro Ala Gly Pro Pro Gly Glu Ala Gly  
645 650 655

Lys Pro Gly Glu Gln Gly Val Pro Gly Asp Leu Gly Ala Pro Gly Pro  
660 665 670

Ser Gly Ala Arg Gly Glu Arg Gly Phe Pro Gly Glu Arg Gly Val Gln  
675 680 685

Gly Pro Pro Gly Pro Ala Gly Pro Arg Gly Ala Asn Gly Ala Pro Gly  
690 695 700

Asn Asp Gly Ala Lys Gly Asp Ala Gly Ala Pro Gly Ala Pro Gly Ser  
705 710 715 720

Gln Gly Ala Pro Gly Leu Gln Gly Met Pro Gly Glu Arg Gly Ala Ala  
725 730 735

Gly Leu Pro Gly Pro Lys Gly Asp Arg Gly Asp Ala Gly Pro Lys Gly  
740 745 750

Ala Asp Gly Ser Pro Gly Lys Asp Gly Val Arg Gly Leu Thr Gly Pro  
755 760 765

Ile Gly Pro Pro Gly Pro Ala Gly Ala Pro Gly Asp Lys Gly Glu Ser  
770 775 780

Gly Pro Ser Gly Pro Ala Gly Pro Thr Gly Ala Arg Gly Ala Pro Gly  
785 790 795 800

Asp Arg Gly Glu Pro Gly Pro Pro Gly Pro Ala Gly Phe Ala Gly Pro  
805 810 815

Pro Gly Ala Asp Gly Gln Pro Gly Ala Lys Gly Glu Pro Gly Asp Ala  
820 825 830

Gly Ala Lys Gly Asp Ala Gly Pro Pro Gly Pro Ala Gly Pro Ala Gly  
835 840 845

Pro Pro Gly Pro Ile Gly Asn Val Gly Ala Pro Gly Ala Lys Gly Ala  
850 855 860

Arg Gly Ser Ala Gly Pro Pro Gly Ala Thr Gly Phe Pro Gly Ala Ala  
865 870 875 880

Gly Arg Val Gly Pro Pro Gly Pro Ser Gly Asn Ala Gly Pro Pro Gly  
885 890 895

Pro Pro Gly Pro Ala Gly Lys Glu Gly Gly Lys Gly Pro Arg Gly Glu  
900 905 910

Thr Gly Pro Ala Gly Arg Pro Gly Glu Val Gly Pro Pro Gly Pro Pro  
915 920 925

Gly Pro Ala Gly Glu Lys Gly Ser Pro Gly Ala Asp Gly Pro Ala Gly  
930 935 940

Ala Pro Gly Thr Pro Gly Pro Gln Gly Ile Ala Gly Gln Arg Gly Val  
945 950 955 960

Val Gly Leu Pro Gly Gln Arg Gly Glu Arg Gly Phe Pro Gly Leu Pro  
965 970 975

Gly Pro Ser Gly Glu Pro Gly Lys Gln Gly Pro Ser Gly Ala Ser Gly  
980 985 990

Glu Arg Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Leu Ala Gly Pro  
995 1000 1005

Pro Gly Glu Ser Gly Arg Glu Gly Ala Pro Gly Ala Glu Gly Ser  
1010 1015 1020

Pro Gly Arg Asp Gly Ser Pro Gly Ala Lys Gly Asp Arg Gly Glu  
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Thr Gly Pro Ala Gly Pro Pro Gly Ala Pro Gly Ala Pro Gly Ala  
1040 1045 1050

Pro Gly Pro Val Gly Pro Ala Gly Lys Ser Gly Asp Arg Gly Glu  
1055 1060 1065

Thr Gly Pro Ala Gly Pro Ala Gly Pro Val Gly Pro Ala Gly Ala  
1070 1075 1080

Arg Gly Pro Ala Gly Pro Gln Gly Pro Arg Gly Asp Lys Gly Glu  
1085 1090 1095

Thr Gly Glu Gln Gly Asp Arg Gly Ile Lys Gly His Arg Gly Phe  
1100 1105 1110

Ser Gly Leu Gln Gly Pro Pro Gly Pro Pro Gly Ser Pro Gly Glu  
1115 1120 1125

Gln Gly Pro Ser Gly Ala Ser Gly Pro Ala Gly Pro Arg Gly Pro  
1130 1135 1140

Pro Gly Ser Ala Gly Ala Pro Gly Lys Asp Gly Leu Asn Gly Leu  
1145 1150 1155

Pro Gly Pro Ile Gly Pro Pro Gly Pro Arg Gly Arg Thr Gly Asp  
1160 1165 1170

Ala Gly Pro Val Gly Pro Pro Gly Pro Pro Gly Pro  
1175 1180 1185

Pro Gly Pro Pro Ser Ala Gly Phe Asp Phe Ser Phe Leu Pro Gln  
1190 1195 1200

Pro Pro Gln Glu Lys Ala His Asp Gly Gly Arg Tyr Tyr Arg Ala  
1205 1210 1215

Asp Asp Ala Asn Val Val Arg Asp Arg Asp Leu Glu Val Asp Thr  
1220 1225 1230

Thr Leu Lys Ser Leu Ser Gln Gln Ile Glu Asn Ile Arg Ser Pro  
1235 1240 1245

Glu Gly Ser Arg Lys Asn Pro Ala Arg Thr Cys Arg Asp Leu Lys  
1250 1255 1260

Met Cys His Ser Asp Trp Lys Ser Gly Glu Tyr Trp Ile Asp Pro  
1265 1270 1275

Asn Gln Gly Cys Asn Leu Asp Ala Ile Lys Val Phe Cys Asn Met  
1280 1285 1290

Glu Thr Gly Glu Thr Cys Val Tyr Pro Thr Gln Pro Ser Val Ala  
1295 1300 1305

Gln Lys Asn Trp Tyr Ile Ser Lys Asn Pro Lys Asp Lys Arg His  
1310 1315 1320

Val Trp Phe Gly Glu Ser Met Thr Asp Gly Phe Gln Phe Glu Tyr  
1325 1330 1335

Gly Gly Gln Gly Ser Asp Pro Ala Asp Val Ala Ile Gln Leu Thr  
1340 1345 1350

Phe Leu Arg Leu Met Ser Thr Glu Ala Ser Gln Asn Ile Thr Tyr  
1355 1360 1365

His Cys Lys Asn Ser Val Ala Tyr Met Asp Gln Gln Thr Gly Asn  
1370 1375 1380

Leu Lys Lys Ala Leu Leu Leu Lys Gly Ser Asn Glu Ile Glu Ile  
1385 1390 1395

Arg Ala Glu Gly Asn Ser Arg Phe Thr Tyr Ser Val Thr Val Asp  
1400 1405 1410

Gly Cys Thr Ser His Thr Gly Ala Trp Gly Lys Thr Val Ile Glu  
1415 1420 1425

Tyr Lys Thr Thr Lys Thr Ser Arg Leu Pro Ile Ile Asp Val Ala  
1430 1435 1440

Pro Leu Asp Val Gly Ala Pro Asp Gln Glu Phe Gly Phe Asp Val  
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Gly Pro Val Cys Phe Leu  
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<212> PRT  
<213> unknown

<220>  
<223> selected gelatin-like peptide with high Tg

<400> 2

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Ala Pro Gly Ala Pro Gly Pro Val Gly Pro Ala Gly Lys Ser Gly Asp  
20 25 30

Arg Gly Glu Thr Gly Pro Ala Gly Pro Ala Gly Pro Val Gly Pro Ala  
35 40 45

Gly Ala Arg Gly Pro Ala  
50